Literature Searching Getting Started

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After this session you will be able to…

- Explain what structured searching is, and when to use it
- Break your research question down into searchable concepts
- Make use of Boolean operators (ANDs/ORs) in your structured searches

Our example question

How effective is AI at detecting breast cancer?

Google

Why can't I just Google it?

Google Search   I'm Feeling Lucky

Our example question

How effective is AI at detecting breast cancer?

Structured search: PICO (1)

How effective is AI at detecting breast cancer?

P patient / population / problem

I(E) intervention / exposure

C comparison, control

O outcome

Other frameworks are available, particularly for qualitative research. See
https://guides.lib.unc.edu/pico/frameworks

Structured search: PICO (2)

How effective is AI at detecting breast cancer?

P patient / population / problem ➡ breast cancer

I(E) intervention / exposure ➡ artificial intelligence screening

C comparison, control ➡ n/a

O outcome ➡ efficacy of AI screening

Structured search: search terms

Concept 1 → breast cancer

Concept 2 → AI

Concept 3 → screening

Structured search: search terms

Concept 1   →   breast cancer, breast tumour

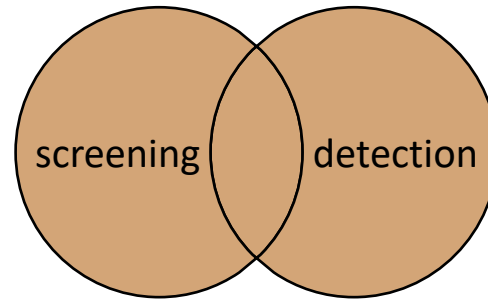Concept 2   →   AI, artificial intelligence, machine learning

Concept 3   →   screening, screen, detection, detect

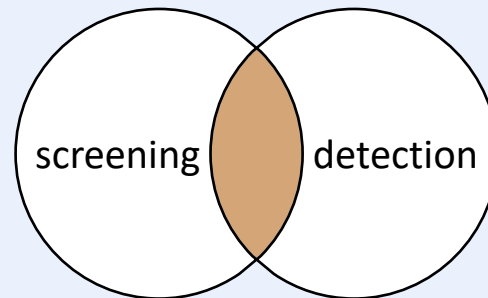# Structured search: combining terms (1)

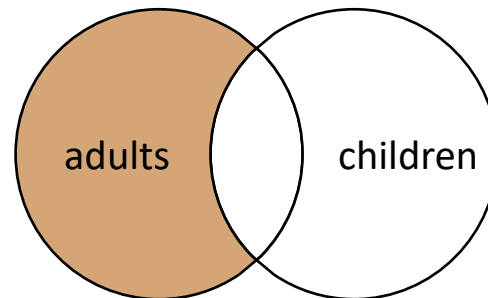**OR** — Broadens your search

screening | detection

screening OR detection

AND — Narrows your search

screening | detection

screening AND detection

NOT — Narrows your search

adults | children

adults NOT children

Structured search: combining terms (2)

("breast cancer")
AND
(ai **OR** "artificial intelligence" **OR** "machine learning")
AND
(detect **OR** detection **OR** screen **OR** screening)

AND = Combining different search concepts, narrows search
OR = Combining synonyms for the same concept, broadens search

Structured search: shortcuts (1)

- **" " quotation marks** – used when searching for phrases
  - e.g. "electronic cigarettes"

- *** asterisk** – used to find different word endings
  - e.g. smok* will find smoker, smokers, smoke, smoking

- **? question mark** - used to find alternative spellings with one letter different
  - e.g. p?ediatric will find paediatric or pediatric

Structured search: shortcuts (2)

("breast cancer*")
AND
(ai **OR** "artificial intelligence" **OR** "machine learning")
AND
(detect* **OR** screen*)

* = truncation
"..." = phrase searching

Structured search: applying limits

Filter by:
- date,
- language,
- publication type (e.g. systematic review, RCT),
- age groups

This carefully about what limits you might want to apply and why. You should have a clear rationale.

Demonstration

pubmed.ncbi.nlm.nih.gov

Managing and organising references

Reference management software

- EndNote and RefWorks (OU subscription)
- Zotero (Free)

Learn more in another workshop

- iSkills sessions

Search process: note taking

At some point, you'll write up your review. To report the search accurately keep notes on:

- Search terms used – full search strategy for each database

- Limits applied

- Databases & web-sites searched

- Date of search

Search process: questions

- Contact us
  - hcl-enquiries@bodleian.ox.ac.uk

- LibGuides
  - Literature Searching
  - Medical Researchers: Research Resources

- Resource list – will be emailed to you after this session